

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Hook, Magnus  
Patti, Joseph M.  
House-Pompeo, Karen L.  
Speziale, Pietro  
Joh, Danny  
McGavin, Martin J.

(ii) TITLE OF INVENTION: FIBRONECTIN BINDING PROTEIN COMPOSITIONS  
AND METHODS OF USE

(iii) NUMBER OF SEQUENCES: 105

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Arnold, White & Durkee  
(B) STREET: P.O. Box 4433  
(C) CITY: Houston  
(D) STATE: TX  
(E) COUNTRY: USA  
(F) ZIP: 77210-4433

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk  
(B) COMPUTER: IBM PC compatible  
(C) OPERATING SYSTEM: PC-DOS/MS-DOS  
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US Unknown  
(B) FILING DATE: Concurrently Herewith  
(C) CLASSIFICATION: Unknown

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 60/036,139  
(B) FILING DATE: 21-JAN-1997

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Hibler, David W.  
(B) REGISTRATION NUMBER: 41,071  
(C) REFERENCE/DOCKET NUMBER: TAMK:189

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 512-418-3000  
(B) TELEFAX: 512-474-7577

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6 amino acids  
(B) TYPE: amino acid

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Ala Asp Val Val Glu Tyr Glu Glu Asp Thr Asn Pro Pro Gly Gly Gln  
1 5 10 15

Val Thr Thr Glu Ser Asn Leu Val Glu Phe Asp Glu Glu Ser Thr  
20 25 30

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Pro Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 6 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(ix) FEATURE:  
(A) NAME/KEY: Modified-site  
(B) LOCATION: 3..6  
(D) OTHER INFORMATION: /note= "X = any amino acid"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Leu Pro Xaa Thr Gly Xaa  
1 5

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 10 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Glu Glu Asp Thr Glu Lys Asp Lys Pro Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 31 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

Ala Asp Val Val Glu Tyr Glu Glu Asp Thr Asn Pro Gly Gly Gly Gln  
1 5 10 15

Val Thr Thr Glu Ser Asn Leu Val Glu Phe Asp Glu Glu Ser Thr  
20 25 30

Val Pro Gln Ile His Gly

35

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Gln Asn Lys Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Gly Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Gln Asn Lys Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Pro Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Lys Pro Ser Tyr Gln Phe Pro Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Gly Gln Asn Glu Gly Gln Gln Thr Ile Glu Glu Asp Thr Thr Pro Pro  
1 5 10 15

Ile Val Pro

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Gly Gln Asn Glu Gly Gln Gln Thr Ile Pro Glu Asp Thr Thr Pro Pro  
1 5 10 15  
Ile Val Pro

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

K P S Y Q F P G H N S V D F E E  
Lys Pro Ser Tyr Gln Phe Pro Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15  
D T L P K V  
Asp Thr Leu Pro Lys Val  
20

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Pro Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15  
Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Lys Ala Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Lys Pro Pro Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Lys Pro Ser Pro Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Lys Pro Ser Tyr Pro Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Lys Pro Ser Tyr Gln Pro Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Lys Pro Ser Tyr Gln Phe Gly Pro His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Lys Pro Ser Tyr Gln Phe Gly Gly Pro Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Lys Pro Ser Tyr Gln Phe Gly Gly His Pro Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Pro Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Pro Asp Phe Glu Glu  
1                   5                   10                   15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Pro Phe Glu Glu  
1                   5                   10                   15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Pro Glu Glu  
1                   5                   10                   15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Pro Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Pro  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Pro Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Pro Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Pro Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Ala Lys  
20

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

Lys Pro Ser Tyr Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Pro  
20

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

Pro Ala Ser Tyr Gln Phe Pro Pro His Asn Ser Val Asp Phe Glu Glu  
1 5 10 15

Asp Thr Leu Pro Lys  
20

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

Gln Asn Ser Gly Asn Gln Ser Pro Glu Glu Asp Thr Glu Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

Gln Asn Ser Gly Asn Gln Ser Phe Pro Glu Asp Thr Glu Glu Asp Lys  
1 5 10 15  
  
Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30  
  
Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:37:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 38 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Pro Asp Thr Glu Glu Asp Lys  
1 5 10 15  
  
Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30  
  
Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:38:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 38 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Pro Thr Glu Glu Asp Lys  
1 5 10 15  
  
Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30  
  
Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Pro Glu Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Pro Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Pro Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:42:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 38 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Glu Pro Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:43:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 38 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Gly Pro Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

Gln Asn Ser Gly Asn Gln Ser Phe Pro Pro Asp Thr Glu Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Pro Pro Asn Ile Val Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

Gln Asn Lys Gly Asn Gln Ser Pro Glu Glu Asp Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

Gln Asn Lys Gly Asn Gln Ser Phe Pro Glu Asp Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Gly Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:47:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 38 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

Gln Asn Lys Gly Asn Gln Ser Phe Glu Pro Asp Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Gly Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:48:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 38 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

Gln Asn Lys Gly Asn Gln Ser Phe Glu Glu Pro Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Gly Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:49:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 38 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS:  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

Gln Asn Lys Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Gly Pro Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

Gln Asn Lys Gly Asn Gln Ser Phe Pro Pro Asp Thr Glu Lys Asp Lys  
1 5 10 15

Pro Lys Tyr Glu His Pro Pro Asn Ile Ile Asp Ile Asp Phe Asp Ser  
20 25 30

Val Pro His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

Ile Val Pro

(2) INFORMATION FOR SEQ ID NO:52:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

Gly Gln Asn Glu Gly Gln Gln Thr Ile Glu Glu Pro Thr Thr Pro Pro  
1 5 10 15

Ile Val Pro

(2) INFORMATION FOR SEQ ID NO:53:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

Gly Gln Asn Glu Gly Gln Gln Thr Pro Glu Glu Asp Thr Thr Pro Pro  
1 5 10 15

Ile Val Pro

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

Ala Asp Val Val Glu Tyr Glu Glu Asp Thr Asn Pro Gly Pro Gly Gln  
1 5 10 15

Val Thr Thr Glu Ser Asn Leu Val Glu Phe Asp Glu Glu Ser Thr  
20 25 30

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(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

Ala Asp Val Val Glu Tyr Pro Pro Asp Thr Asn Pro Pro Pro Gly Gln  
1 5 10 15

Val Thr Thr Glu Ser Asn Leu Val Glu Phe Asp Glu Glu Ser Thr  
20 25 30

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Glu Asp Lys  
1Q N S G 5N Q S F E F D T E E 15D K

Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Ser Asp  
P K Y 20E Q G G N 25I V D I D 30F S D

Ser Val Pro Gln Ile His Gly  
S V 35P Q I H G

(2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Glu Asp Lys  
1 5 10 15

Pro Lys Tyr Glu Gln Pro Gly Asn Ile Val Asp Ile Asp Phe Ser Asp  
20 25 30

Ser Val Pro Gln Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

Tyr Glu His Gly Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser Val Pro  
20 25 30

His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:59:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

Gln Asn Lys Gly Asn Gln Ser Phe Glu Glu Asp Thr Glu Lys Asp Lys  
1 5 10 15

Tyr Glu His Pro Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser Val Pro  
                  20                     25                         30

His Ile His Gly  
35

(2) INFORMATION FOR SEQ ID NO:60:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(2) INFORMATION FOR SEQ ID NO:60:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 14 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

Gln Gly Gly Asn Ile Val Asp Ile Asp Phe Asp Ser Val Pro  
1 5 10

(2) INFORMATION FOR SEQ ID NO:61:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 14 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

Gln Phe Gly Gly His Asn Ser Val Asp Phe Glu Glu Asp Thr  
1 5 10

(2) INFORMATION FOR SEQ ID NO:62:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

Ser Phe Glu Glu Asp Thr Glu Lys Asp Lys Pro Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:63:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

Gln Asn Ser Gly Asn Gln Ser Phe Glu Glu  
1 5 10

(2) INFORMATION FOR SEQ ID NO:64:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

Ser Gly Asn Gln Ser Phe Glu Glu Asp Thr  
1 5 10

(2) INFORMATION FOR SEQ ID NO:65:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

Asn Gln Ser Phe Glu Glu Asp Thr Glu Glu  
1 5 10

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

Ser Phe Glu Glu Asp Thr Glu Glu Asp Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:67:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

Glu Glu Asp Thr Glu Glu Asp Lys Pro Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

Asp Thr Glu Glu Asp Lys Pro Lys Tyr Glu  
1 5 10

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

Glu Glu Asp Lys Pro Lys Tyr Glu Gln Gly  
1 5 10

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

Asp Lys Pro Lys Tyr Glu Gln Gly Gly Asn  
1 5 10

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

Pro Lys Tyr Glu Gln Gly Gly Asn Ile Val  
1 5 10

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

Tyr Glu Gln Gly Gly Asn Ile Val Asp Ile  
1 5 10

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

Gln Gly Gly Asn Ile Val Asp Ile Asp Phe  
1 5 10

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

Gly Asn Ile Val Asp Ile Asp Phe Asp Ser  
1 5 10

(2) INFORMATION FOR SEQ ID NO:75:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

Ile Val Asp Ile Asp Phe Asp Ser Val Pro  
1               5                           10

(2) INFORMATION FOR SEQ ID NO:76:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

Asp Ile Asp Phe Asp Ser Val Pro Gln Ile  
1               5                           10

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

Asp Phe Asp Ser Val Pro Gln Ile His Gly  
1               5                           10

(2) INFORMATION FOR SEQ ID NO:78:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

Asp Ser Val Pro Gln Ile His Gly Gln Asn  
1               5                           10

(2) INFORMATION FOR SEQ ID NO:79:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

Val Pro Gln Ile His Gly Gln Asn Lys Gly  
1 5 10

(2) INFORMATION FOR SEQ ID NO:80:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

Gln Ile His Gly Gln Asn Lys Gly Asn Gln  
1 5 10

(2) INFORMATION FOR SEQ ID NO:81:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

His Gly Gln Asn Lys Gly Asn Gln Ser Phe  
1 5 10

(2) INFORMATION FOR SEQ ID NO:82:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

Gln Asn Lys Gly Asn Gln Ser Phe Glu Glu  
1 5 10

(2) INFORMATION FOR SEQ ID NO:83:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

Lys Gly Asn Gln Ser Phe Glu Glu Asp Thr  
1 5 10

(2) INFORMATION FOR SEQ ID NO:84:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

Asn Gln Ser Phe Glu Glu Asp Thr Glu Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:85:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

Ser Phe Glu Glu Asp Thr Glu Lys Asp Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:86:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

Val Asp Phe Glu Glu Asp Thr Leu Pro Lys Val  
1 5 10

(2) INFORMATION FOR SEQ ID NO:87:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

Phe Glu Glu Asp Thr  
1 5

(2) INFORMATION FOR SEQ ID NO:88:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

Phe Asn Lys His Thr Glu Ile Ile Glu Glu  
1 5 10

(2) INFORMATION FOR SEQ ID NO:89:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

Lys His Thr Glu Ile Ile Glu Glu Asp Thr  
1 5 10

(2) INFORMATION FOR SEQ ID NO:90:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

Thr Glu Ile Ile Glu Glu Asp Thr Asn Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:91:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

Ile Ile Glu Glu Asp Thr Asn Lys Asp Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:92:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

Glu Glu Asp Thr Asn Lys Asp Lys Pro Ser  
1 5 10

(2) INFORMATION FOR SEQ ID NO:93:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

Asp Thr Asn Lys Asp Lys Pro Ser Tyr Gln  
1 5 10

(2) INFORMATION FOR SEQ ID NO:94:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

Asn Lys Asp Lys Pro Ser Tyr Gln Phe Gly  
1 5 10

(2) INFORMATION FOR SEQ ID NO:95:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

Asp Lys Pro Ser Tyr Gln Phe Gly Gly His  
1 5 10

(2) INFORMATION FOR SEQ ID NO:96:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

Pro Ser Tyr Gln Phe Gly Gly His Asn Ser  
1 5 10

(2) INFORMATION FOR SEQ ID NO:97:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

Tyr Gln Phe Gly Gly His Asn Ser Val Asp  
1 5 10

(2) INFORMATION FOR SEQ ID NO:98:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

Phe Gly Gly His Asn Ser Val Asp Phe Glu  
1 5 10

(2) INFORMATION FOR SEQ ID NO:99:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

Gly His Asn Ser Val Asp Phe Glu Glu Asp  
1 5 10

(2) INFORMATION FOR SEQ ID NO:100:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS:
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

Asn Ser Val Asp Phe Glu Glu Asp Thr Leu  
1 5 10

SEQUENCE ID: 97-100

(2) INFORMATION FOR SEQ ID NO:101:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

Val Asp Phe Glu Glu Asp Thr Leu Pro Lys  
1 5 10

(2) INFORMATION FOR SEQ ID NO:102:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

Asp Phe Glu Glu Asp Thr Leu Pro Lys Val  
1 5 10

(2) INFORMATION FOR SEQ ID NO:103:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

His Gly Gly Asn Ile Ile Asp Ile Asp Phe Asp Ser Val Pro  
1 5 10

(2) INFORMATION FOR SEQ ID NO:104:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

Ser Val Asp Phe Glu Glu Asp Thr  
1 5

(2) INFORMATION FOR SEQ ID NO:105:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

Ser Phe Glu Glu Asp Thr Glu Glu Asp Lys Pro Lys Tyr Glu  
1 5 10